LISTING OF THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A glass plate cutting machine to generate a scribe line on the glass plate and then break the plate, comprising:

a cracking unit to provide a micro-crack at a cutting initiation point of a glass plate;

an irradiation unit to irradiate at least one laser beam, which is absorbed in the glass plate, to the glass plate to heat the glass plate, and including a first carbon dioxide laser beam irradiation part;

a cooling unit to cool the glass plate by use of a cooling fluid after irradiation of the at least one laser beam, and including a first cooling part; and

a breaking unit to break the glass plate,

wherein the first carbon dioxide laser beam irradiation part and the first cooling part ~~first part~~ disposed at the rear of the first carbon dioxide laser beam irradiation part are used to generate the scribe line while a plane irradiation density is controlled in a range of 0.05-2 joule/㎟ on an irradiation area of 20-200 ㎟ by a first control part.

2. (Original) The machine as defined in claim 1, wherein the breaking unit comprises a second carbon dioxide laser beam irradiation part, and thus is used to break the glass plate while a volume irradiation density is controlled in the range of 0.1-0.5 joule/㎣ on the irradiation area of 20-200 ㎟ by a second control part.

3. (Currently Amended) The machine as defined in claim 2, further comprising a second cooling part by cooling a cooling fluid disposed at the rear of the second carbon dioxide laser beam irradiation part.

4. (Currently Amended) The machine as defined in claim 1, wherein [[the]] a second control part functions to decrease the volume irradiation density of the breaking unit to 10-60%

at an area between the cutting initiation point of the glass plate and a point of 10-150 mm upon an initial cutting.

5. (Currently Amended) The machine as defined in claim 4, wherein the second control part functions to control irradiation intensity of the initial cutting and after the initial cutting in a nonlinear manner ~~a continuous curvilinear manner or two or more stepped manner~~ when the irradiation intensity of the breaking unit decreases to 10-60% upon the initial cutting.

6. (Previously Presented) The machine as defined in claim 2, wherein the plane irradiation density or the volume irradiation density is controlled by adjusting at least one of an output, an irradiation area and a transfer rate of the irradiation unit.

7. (Original) The machine as defined in claim 6, further comprising a synchronizing unit acting to change the output of the irradiation unit in proportion to the transfer rate of the irradiation unit, so as to control the output and the transfer rate of the irradiation unit.

8. (Previously Presented) The machine as defined in claim 1, wherein the cooling fluid of the cooling unit comprises water.

9. (Currently Amended) The machine as defined in claim 1, further comprising a vacuum suction machine sucking [[of]] the fluid disposed at the direct rear of the cooling unit.

10. (Cancelled)

11. (Cancelled)

12. (New) A method of manufacturing a glass plate using a cutting machine to generate a scribe line on the glass plate and then break the plate, comprising:

providing a micro-crack at a cutting initiation point of a glass plate;

using an irradiation unit to irradiate at least one laser beam, which is absorbed in the glass plate, to the glass plate to heat the glass plate, and including a first carbon dioxide laser beam irradiation part;

a cooling unit to cool the glass plate by use of a cooling fluid after irradiation of the at least one laser beam, and including a first cooling part; and

breaking the glass plate using a breaking unit,

wherein the first carbon dioxide laser beam irradiation part and the first cooling part disposed at the rear of the first carbon dioxide laser beam irradiation part are used to generate the scribe line while a plane irradiation density is controlled in a range of 0.05-2 joule/mm^2 on an irradiation area of 20-200 mm^2 by a first control part.